



UNITED STATES PATENT AND TRADEMARK OFFICE

NY
UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/064,068	06/06/2002	Erdogan Cesmeli	RD-28,701-2.	3166

23465 7590 06/17/2003

JOHN S. BEULICK
C/O ARMSTRONG TEASDALE, LLP
ONE METROPOLITAN SQUARE
SUITE 2600
ST LOUIS, MO 63102-2740

EXAMINER

SONG, HOON K

ART UNIT

PAPER NUMBER

2882

DATE MAILED: 06/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/064,068	Applicant(s) CESMELI, ERDOGAN	
	Examiner Hoon Song	Art Unit 2882	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 June 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Drawings

Figure 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Hu et al. (US 6370217).

Regarding claims 1, 4, 8, 11, 15 and 18, Hu teaches a method for imaging a desired coronary artery or desired portion thereof utilizing a computed tomography (CT) imaging system comprising a rotating gantry, a detector array on the rotating gantry, and a radiation source on the rotating gantry configured to project a beam of radiation towards the detector array through a patient's heart; said method comprising (abstract):

scanning a volume of the patient's heart with the CT imaging system to acquire projection data (column 4 line 33+), the volume including at least a first and second (multi-phase, column 7 line 20+) desired coronary artery branch segment (column 4 line 36) and the acquired projection data including a first and second projection dataset (multi-phase, column 7 line 20+) representing the first and second desired coronary artery branch segment acquired during a first and second desired cardiac phase (multi-phase, column 7 line 20+) of a plurality of cardiac cycles of the patient (column 4 line 48+)

selecting the first and second (plurality) cardiac phase corresponding to a low motion period of the first desired coronary artery branch segment of a patient's heart (column 4 line 42+)

reconstructing a first and second 2D image of the first and second desired coronary artery branch segment utilizing the first and second projection dataset acquired during the first and second desired cardiac phase of a plurality of cardiac cycles to reduce motion artifacts of the first and second desired coronary artery branch segment (column 6 line 44+); and

reconstruct at least one 3D image of the coronary artery utilizing the first 2D image and the second (2D image (column 4 line 38+).

Regarding claims 2, 5, 9, 16 and 19, Hu teaches that said reconstructing at least one 3D image including the desired coronary artery branch segment comprises reconstructing a 2D image excluding projection data other than the projection dataset acquired during the selected cardiac phase of a plurality of cardiac cycles (column 7 line

20+), and combining the 2D image to effectively reduce motion artifacts of both the desired coronary artery in the generated 3D image (column 8 line 3+).

Regarding claims 3, 10, 12, 17 and 20, Hu teaches that said reconstructing at least one 3D image including the plurality of desired coronary artery branch segment comprises selectively utilizing (column 7 line 20+) the plurality of projection dataset acquired during the plurality desired cardiac phase of a plurality of cardiac cycles in reconstruction to effectively reduce motion artifacts of both desired coronary artery in the 3D image.

Regarding claims 6 and 13, Hu teaches that said data compilation of low motion cardiac phases and corresponding coronary artery branch segments is a data compilation derived from observations of a plurality of individuals (column 4 line 49+).

Regarding claims 7 and 14, Hu teaches that said data compilation is derived solely from individuals other than the patient (column 4 line 49+).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoon Song whose telephone number is 703-308-2736. The examiner can normally be reached on 8:30 AM - 5 PM, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on 703-305-3492. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-4858 for regular communications and 703-308-7724 for After Final communications.

Application/Control Number: 10/064,068

Page 5

Art Unit: 2882

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

Hoon Song
June 4, 2003

A handwritten signature in cursive script, appearing to read "David Bruce".

DAVID V. BRUCE
PRIMARY EXAMINER